

CAPITOPHORUS AND AMPHOROPHORA APHID NOTES.

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Many of the following records are based on identifications recently made by Professor M. A. Palmer. The aphid names used, in general, follow her 1952 book—"Aphids of the Rocky Mountain Region."

Capitophorus braggi (Gillette). On *Eleagnus angustifolia* and *E. canadensis* at Logan, Utah, October 1950 (Knowlton—E. H. Kardos); on Russian olive at Lone Deer and Plerna, Montana, October 1941 (H. F. Thornley); alates on celery at American Fork during September of 1951.

C. corambus H. Alate on red currant, *Ribes*, at Orem, Utah, May 27, 1938 (Knowlton).

C. fragaefolii (Cockerell). On strawberry at Ogden, Farmington and Riverheights, Utah, June 1935; in Washington at Lynden (E. Breakey), Sumas (C. H. Johansen), Puyallup (W. W. Baker, H. C. Bennion, Knowlton, C. D. Schwartz), Vancouver and Ridgefield (D. L. Bischoff); on *Rosa* at Choteau, Montana, July 23, 1946 (Knowlton); and *Rosa woodsii* in Logan Canyon, Utah, July 3, 1938 (Knowlton—W. P. Nye) and Mt. Alice, Utah, June 24, 1946 (Knowlton).

C. frigidae Palmer. On *Artemisia tridentata* and *A. vulgaris*, at Gallatin, and Fort Ellis, Montana, July 1936; Brigham, Hurricane, Logan, Logan Canyon, Paradise and Sardine Canyon in Utah; and Fish Haven, Idaho, August 16, 1927 (Knowlton).

C. hippophaes (Walker). On *Salix* at Farmington and Riverdale, Utah, October 3, 1942; alates on celery in late summer and fall at American Fork, Pleasant Grove and Farmington, in Utah; on *Polygonum* at Puyallup, Washington, August 23, 1937 (H. C. Bennion).

C. longinectarius G.-P. On *Artemisia* at Fishing Bridge, Yellowstone National Park, Wyoming, July 18, 1936 (Knowlton).

C. magnautensis K.-S. On *Chrysothamnus viscidiflorus* at Sisters, Oregon, August 24, 1944 (Knowlton); Lonetree, Wyoming (Knowlton).

C. minor (Forbes). On *Potentilla* at Puyallup, Washington, April (W. W. Baker) and May (A. J. Hanson); on strawberry foliage at Ogden, June 11, 1935 (Knowlton), and Riverheights, July 16, 1935 (C. F. Smith), in Utah.

C. oestlundii K. On *Chrysothamnus nauseosus* at Helena, Mon-

tana, August 2, 1944 (Knowlton), at Lavina and Three Forks, Montana, (H. F. Thornley).

C. packi (K.). *Chrysothamnus nauseosus* at Farmington, Utah; on rabbit brush at Beaver Dam Lodge, Arizona, April 25, 1935 (Knowlton).

C. pseudoglandulosus Palmer. On *Artemisia frigida* at Acton, Montana, July 1, 1942 (Thornley); Monte Cristo, Utah, July 1952 (Knowlton).

C. pullus G.-P. On *Artemisia* at Forsythe, Montana, June 1, 1942 (Thornley); accidental alate on cowparsnip in Logan Canyon, Utah (Knowlton).

C. ribis (L.). Attacking red currant at Wellsville, North Ogden and Linden, Utah during 1953; *Ribes* at Jackson Hole, Wyoming, June 13, 1936 (C. F. Smith); alate on strawberry at Puyallup, Washington, June 30, 1947 (C. D. Schwartz).

C. rusticatus K.-S. *Artemisia cana* at Wheatland, Wyoming, September 9, 1948 (Knowlton—Thornley).

C. wasatchii K. On *Chrysothamnus* at Moses Lake, Washington, April 17, 1947 (Knowlton).

C. xanthii (Oestlund). On cocklebur at American Fork, Utah, September 27, 1950.

Amphorophora agathonica Hottes. On raspberry, *Rubus*, in Glacier National Park, Montana, July 23, 1946 (Knowlton).

A. arnicae Glendenning. On *Arnica* at foot of Puyallup Glacier, Mt. Rainier, Washington, July 3, 1934 (H. C. Bennion); alates on leaves beneath *Populus tremuloides* trees in Smithfield Canyon, Utah, July 28, 1939 (Knowlton—C. J. Davis).

A. brevitarsis G.-P. On *Sorbus*, or Mt. Ash, Paradise Valley, Washington, September 7, 1936 (W. W. Baker).

A. crataegi (Monell). On *Crataegus* at Bountiful, (Knowlton—R. S. Roberts), and alates on chokecherry in Logan Canyon, June 24, 1928 (Knowlton).

A. crystleae S.-K. Numerous on twinberry, *Lonicera*, at Mt. Timpanogos and American Fork Canyon, July 26, 1942, and at Mt. Nebo, in Utah (Knowlton); also Cub River Canyon, Idaho, July 11, 1953 (Knowlton).

A. franki K. On wild raspberry at Mt. Timpanogos, Utah, July 19, 1951 (Knowlton).

A. goldamaryae K. On wild raspberry, *Rubus*, at Glacier National Park, Montana, July 23, 1946 (G. F. and Mary W. Knowlton).

A. grindeliae (Wms.). On *Grindelia squarrosa* at Ogden, June

4, 1948 (Knowlton), Aspen Grove, Mt. Timpanogos, Utah, June 13, 1940 (C. L. Hayward); several accidental alates collected on celery in northern Utah.

A. halli K. On weeping birch, *Betula*, at Hooper, Utah, August 21, 1939 (Knowlton).

A. janesi K. Alates on *Chrysothamnus parryi* at Joseph, Utah, September 20, 1927 (Knowlton).

A. masoni (K.). On *Helianthus annuus* at Toquerville, Utah, June 18, 1935, and at Geneva Steel Plant west of Orem, Utah; alate male on raspberries at Farmington, Utah, October 22, 1937 (Knowlton).

A. morrisoni (Swain). *Sabina*, on Peavine Ridge, McMannville, Oregon, April 25, 1947 (K. M. Fender).

A. nervata (Gill.). On *Rosa woodsii* at Garden City, Utah, June 1952; Mesa, Arizona, March 25, 1945 (Knowlton); at Hoback, Wyoming, and at Mary's Lake, Montana, July 23, 1946 (Knowlton).

A. nigricornis K. Numerous enough to damage black currants, *Ribes*, at Kaysville, Utah, June 9, 1938 (Knowlton), and on yellow currant foliage at Nibley, Utah, September 19, 1939 (Knowlton).

A. ribiella (Davis). Abundant on *Ribes* at Trenton, Utah, June 1937, on black currant at Farmington, Lewiston, Magna, Richmond, and on "bedbug" currant at American Fork Canyon, and at Altamont, Utah, July 25, 1940 (Knowlton), causing damage in a number of instances.

A. rhokalozza Tissot and Pepper. On *Rhododendron*, Long Beach, Washington, July 20, 1948 (C. Johansen).

A. rubi (Kalt.). Numerous on wild raspberry at Miner's Basin, Grand County, Utah, July 28, 1938 (Knowlton); on *Rubus laciniatus* at Talent, Oregon, May 4, 1951 (L. G. Gentner); black raspberries, Yelm, Washington, July 25, 1936 (G. A. Huber); red raspberries at Hooper, Utah, September 16, 1935 (Knowlton—W. P. Nye); black and cuthbert raspberries at Puyallup, Washington, 1936 and 1952 (G. A. Huber), and Vancouver, Washington (D. L. Bischoff); wild raspberry at Glacier National Park, Montana, July 23, 1946 (Knowlton), and Aspen Grove, Utah, June 13, 1940, and Indian Canyon summit, Utah, September 5, 1945 (Knowlton).

A. rubicola (Oestlund). Salmonberry, Orick, California, June 22, 1939 (Knowlton).

A. rubicumberlandi K.-A. Damaging blackcap raspberries at Puyallup, Washington, June 19, 1939 (Knowlton—Huber); Kelso, Washington, June 21, 1939 (Huber).

A. sensoriata Mason. On raspberry, *Rubus*, at Pleasant Grove, Utah, October 22, 1937 (Knowlton); Baker, and Freewater, Oregon, June 1937 (S. M. Zeller).

A. sonchi (Oestlund). On black currant at Riverton, Utah, October 5, 1938; on crested wheatgrass in the greenhouse at Logan, December 15, 1939; on celery at Midvale and Murray, Utah, October 10, 1952; specimens found to be stored inside a hollow burrow in a blackberry root at Hatch, Washington, July 20, 1937, together with some *Macrosiphum* sp. and other *Amphorophora* spp. (W. W. Baker); damaging black currant at Farmington, Utah, September 30, 1937; Littlefield, Arizona, April 18, 1946 (Knowlton).

A. tigvatensa Hottes. Dewberry at Puyallup, Washington, June 19, 1939 (Knowlton); and abundant on wild raspberry in Miner's Basin, LaSal Mts., Grand County, Utah, July 28, 1938 (Knowlton); raspberry at Puyallup, Washington (C. Johansen); and blackberry at Glacier National Park, Montana, July 23, 1946 (Knowlton).

Supplementary notes: Specimens of *Kakimia wahinkae* (Hottes) were collected on larkspur at Mt. Timpanogos, Utah, July 26, 1942 (Knowlton). *K. utahensis* K. was collected on columbine at Morgan, Utah, July 11, 1947 (Knowlton—T. Tibbetts).

Aphis artemisicola Wms. was very abundant on *Artemisia tridentata* at Huntington, Oregon, June 18, 1939.

Aphis forbesi Weed was abundant in one patch of strawberries at Mill Creek, Utah, June 28, 1925; also taken on strawberry plants at Farmington, August 4, 1925, and abundant in greenhouse at Logan, Utah, March 26, 1942.

Aphis illinoisensis Shimer was taken on grape tendrils at Bloomfield, Mo., May 19, 1922 (A. C. Burrill), and Mercersbury, Pa., June 12, 1931 (J. O. Pepper).

Aphis marutae Oest. on *Cineraria*, Pullman, Washington, November 17, 1941 (L. K. Jones).

Aphis nasturtii Kalt. was moderately abundant on watercress, *Roripa nasturtium*, at Locomotive Springs, Utah, April 10, 1930.

Aphis tulipae (Boyer) was damagingly abundant on carrots in storage at Logan, January 1942, and Salt Lake City, April 3, 1942.